

**MAGNETIC ENCODER FOR POWERED WINDOW COVERING****ABSTRACT OF THE DISCLOSURE**

A motor for turning the rod of an object such as a window covering is attached to an elongated ferromagnetic bar. Magnets are closely spaced from the bar, and as the bar rotates to cut the magnetic field lines, pickup coils generate signals that can be used to determine the direction and speed of rotation and also the position of the motor (and, hence, the position of the object being moved). The magnets brake the motor from turning under the weight of the object when the motor is deenergized.